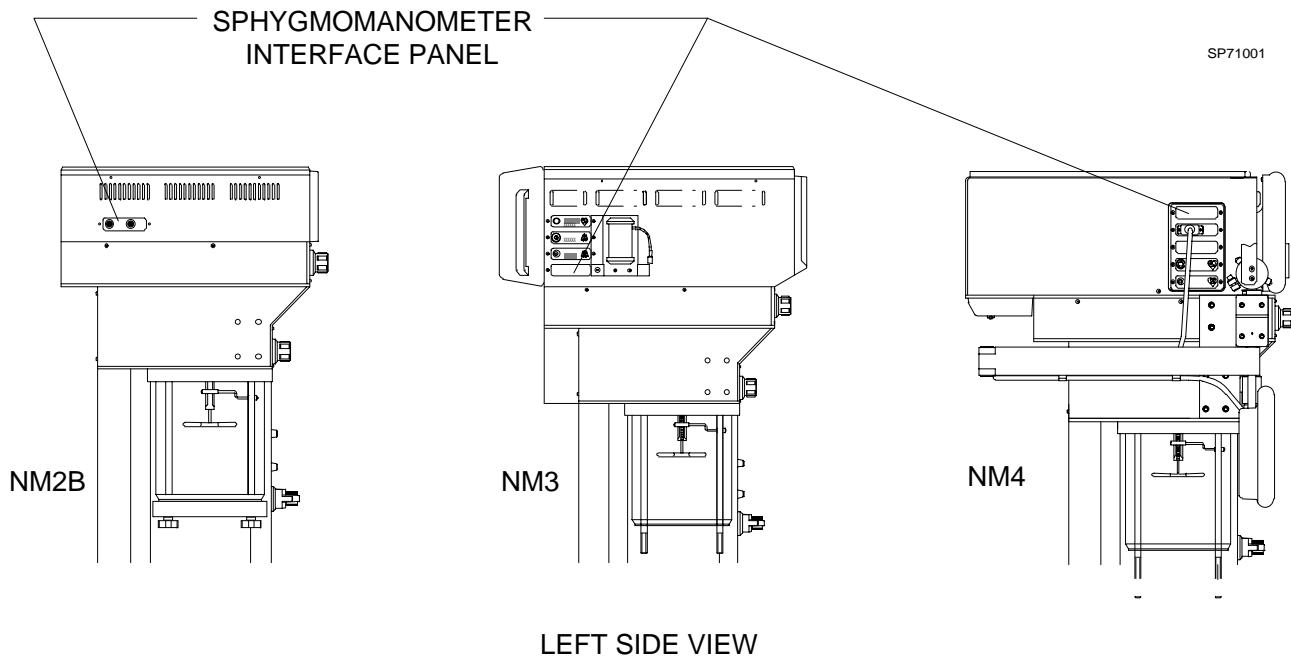


# INSTALLATION PROCEDURE FOR MANUAL SPHYGMOMANOMETER ON NARKOMED 2B, 3 AND 4

## INSTALLATION PROCEDURE

1. Disconnect all pipeline hoses and set the System Power switch to ON.
2. Close all cylinder valves except the O<sub>2</sub> valve.
3. Set the oxygen flow to 5 liters per minute.
4. Open the other gas flow control valves to drain pressure from the system.
5. Close the oxygen cylinder valve and all other flow control valves. Press the O<sub>2</sub> Flush valve to drain oxygen pressure from the system.
6. Set the System Power switch to STANDBY.
7. Unplug the system AC power cord and disable all circuit breakers.
8. Remove the screws securing the table top to the machine, and remove the table top.
9. Pull the writing or keyboard tray out to its fully extended position.
10. Remove the screws from the perimeter of the CRT/monitor housing assembly.
11. Prop up the front portion of the CRT/monitor housing assembly, and insert a 4"x4"x18" piece of wood, or similar support, between the center rib and right wall of ventilator box to support the CRT/monitor housing assembly.
12. Remove the two screws securing the monitor interface blank panel, and remove the panel. See Figure 1.
13. Install the sphygmomanometer interface panel in place of the blank panel using the two screws previously removed.
14. Remove the 5/16 in. diameter plug located on the front of the machine next to the handle.
15. Insert the BPG jack through the hole where the plug was removed, and secure the jack with a 5/16-18 hex nut. See Figure 2.
16. Install the "BP BULB" label using two 0 x 3/16 round head drive screws.

INSTALLATION PROCEDURE (continued)



LEFT SIDE VIEW

Figure 2: LOCATIONS OF SPHYGMOMANOMETER INTERFACE PANEL

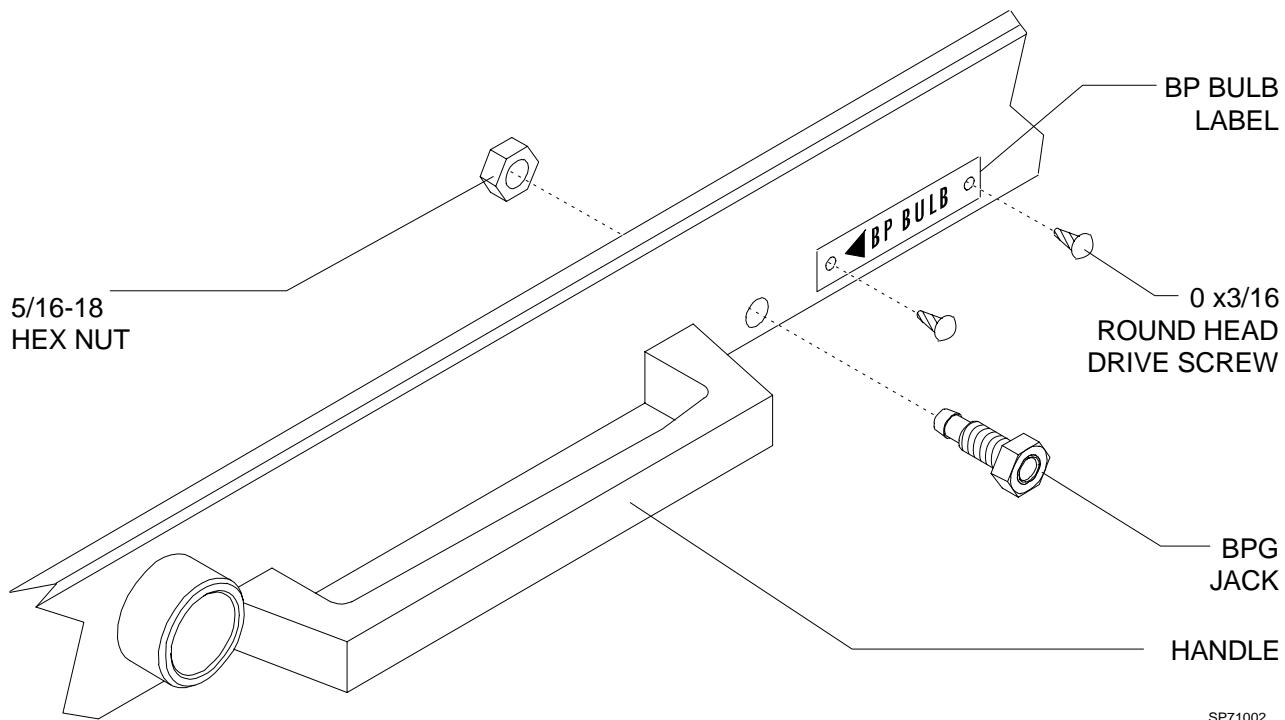
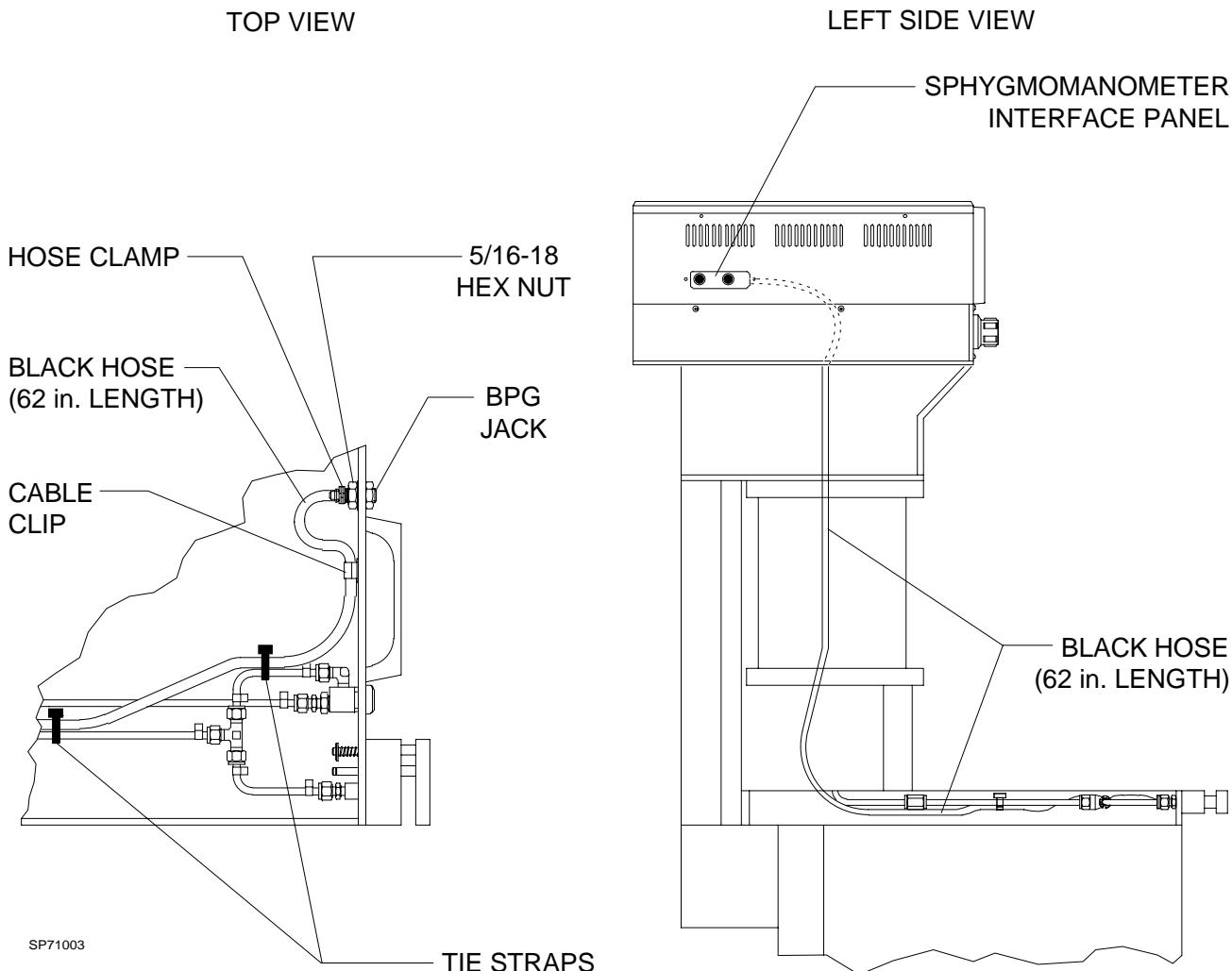


Figure 3: BPG JACK AND "BP BULB" LABEL INSTALLATION

**INSTALLATION PROCEDURE (continued)**

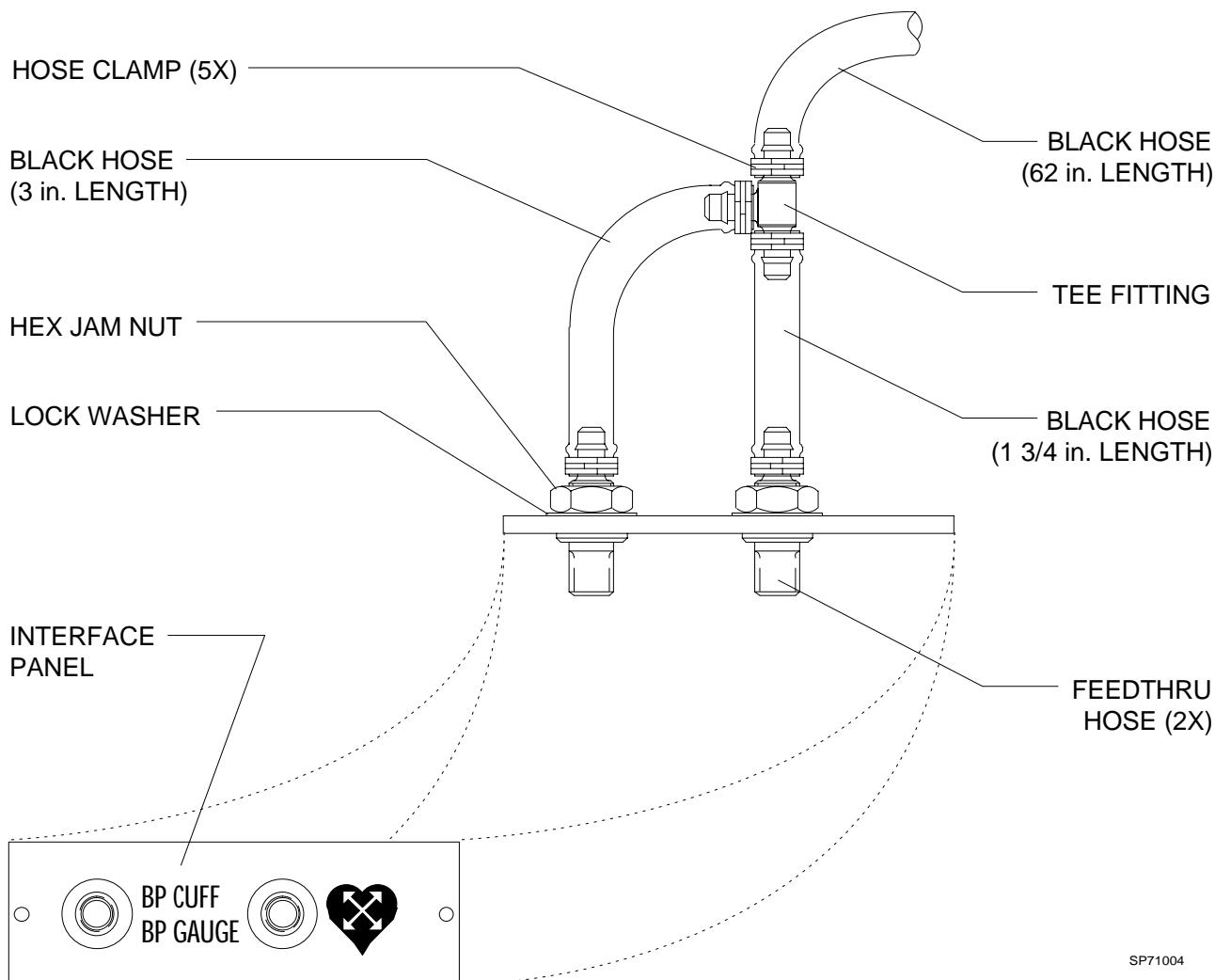
17. Cut a 62 in. length of black hose, and secure one end of the hose to the BPG jack with a hose clamp (see Figure 3).
18. Affix a cable clip to the inside of the machine frame approximately 3 in. to the left of the BPG jack.
19. Using tie straps, secure the black hose to the copper tubing, guiding the hose to the back of the machine.
20. Guide the hose up through the flowmeter housing to the back of the sphygmomanometer interface panel (Figure 3). Attach a tee fitting to the end of the hose, and secure the connection with a hose clamp (Figure 4).



**Figure 4: ROUTING OF HOSE (NARKOMED 2B ILLUSTRATED)**

**INSTALLATION PROCEDURE (continued)**

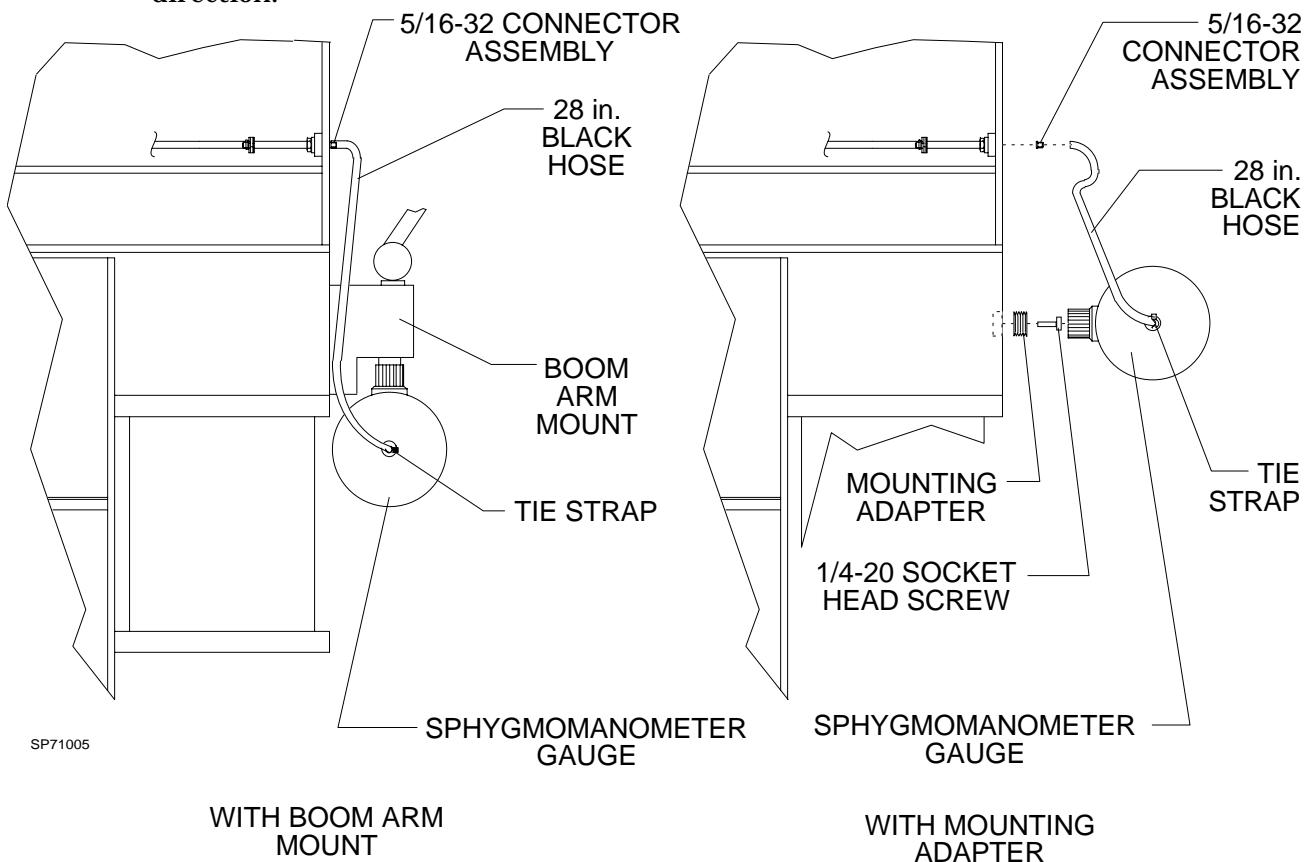
21. Cut a 3 in. length and a 1 and 3/4 in. length of black hose. Attach one end of each length of hose to the tee fitting, and secure the connections with hose clamps. See Figure 4.
22. Insert 5/16-32 feedthru hoses through the BP CUFF and BP GAUGE openings on the sphygmomanometer interface panel. Connect the 3 in. length of black hose to the BP CUFF feedthru hose, and the 1 and 3/4 in. length of black hose to the BP GAUGE feedthru hose using two 5/16-24 hex jam nuts and washers. Secure the connections with hose clamps.



**Figure 5: ATTACHING HOSE TO INTERFACE PANEL**

**INSTALLATION PROCEDURE (continued)**

23. If the machine is equipped with an optional boom arm, install the sphygmomanometer assembly in the threaded fitting on the underside of the boom arm mounting block. Tighten the gauge mounting ring in a clockwise direction. See Figure 5.
24. If the machine is not equipped with a boom arm, remove the plug on the left side of the bellows box and attach the mounting adapter. Ensure that the roll pin in the adapter is properly inserted, and secure the adapter using a 1/4-20 screw. Install the gauge in the mount by tightening the gauge mounting ring in a clockwise direction.
25. Attach one end of a 28 in. length of black hose to a 5/16-32 connector assembly, and thread the connector onto the BP GAUGE fitting on the interface panel.
26. Secure the other end of the black hose to the back of the sphygmomanometer gauge using a tie strap.



**Figure 6: METHODS OF MOUNTING SPHYGMOMANOMETER GAUGE, REAR VIEW**

**INSTALLATION PROCEDURE (continued)**

27. Remove the prop supporting the CRT/monitor housing assembly.
28. Reinstall the screws around the perimeter of the CRT/monitor housing assembly.
29. Replace the table top and its retaining screws.
30. Plug the system AC power cord back in, and reset all circuit breakers.
31. Reconnect all pipeline hoses, open all flow control valves, and set the System Power switch to ON.
32. Perform the following manual sphygmomanometer test. A blood pressure cuff must be properly attached to the sphygmomanometer interface panel to perform this test.
  - a. Insert the male Luer fitting of a Sphygmomanometer squeeze bulb-hose assembly into the female Luer fitting labeled BP BULB on the front of the machine.
  - b. Wrap the blood pressure cuff around an "E" cylinder.
  - c. Hand-pump the squeeze bulb until pressure of 200 mm Hg is indicated on the Sphygmomanometer gauge on the machine. Pinch the hose adjacent to the Luer fitting to assure that the hose-bulb is not the source of any leak.
- d. After thirty (30) seconds the Sphygmomanometer gauge should indicate from 190 to 200 mm Hg.
- e. Bleed the pressure.
- f. The Sphygmomanometer should indicate within the band.
- g. Attach a test Sphygmomanometer in series with the gauge being tested.
- h. Hand-pump the squeeze bulb until the machine gauge indicates 100 mm Hg.
- i. The test gauge should indicate from 90 to 110 mm Hg.
- j. Hand-pump the squeeze bulb until the machine gauge indicates 200 mm Hg.
- k. The test gauge should indicate from 180 to 220 mm Hg.
- l. Hand-pump the squeeze bulb until the machine gauge indicates 300 mm Hg.
- m. The test gauge should indicate from 270 to 330 mm Hg.
- n. Remove the test gauge.
- o. Remove the blood pressure cuff from the "E" cylinder.

33. Perform a complete PMS on the unit.

**PARTS REQUIRED**

<b>PART DESCRIPTION</b>	<b>PART NUMBER</b>
Barb, connector, 3/16 ID Hose	4109089
Ring, Retaining	4105976
Barrel, 5/16-32 F Connector	4109090
Screw, Btn Hd Skt, 6-32 x $\frac{3}{8}$ (2x)	HW09000
O-Ring, #006 (Neoprene)	4109086
Screw, Cap Skt Hd, $\frac{1}{4}$ -20 x $\frac{3}{4}$	HW01036
Screw, Drive, Rd Hd 0 x 3/16 (2x)	HW11000
Nut, Hex, 5/16-18	HW50008
Washer, Lock, Int-t 5/16 (2x)	HW67010
Nut, Hex Jam 5/16-24 (2x)	HW52005
Feedthru, 5/16-32M x 3/16 ID Hose (2x)	4108257
Panel, NAD Sphyg. Interface	4109287
Tutting, Tee, 5/32 ID Tube	4109292
Sphygmomanometer Assembly	4109360
Label, BP Bulb	4109394
Tie Strap, 0.09 x $4\frac{1}{2}$ Lg Black (3x)	4106068
Hose, Blk, 3/16 ID x 5/16 OD (94 $\frac{3}{4}$ in.)	ML08014
Clip, Power Cable, $\frac{3}{8}$ D	4107047
BPG Jack	4101910
Adapter, Mounting	4109347
Clamp, Hose, 0.320 ID (6x)	4110618-006
Cuff Assembly, BP, Adult	4109095
Hose Assembly, Cuff Extension	4108971
Bulb & Hose Assembly	4109398



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